The ILLINOIS ENGINEER

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INCORPORATED

Affiliated with the National Society of Professional Engineers
614 East Green Street Champaign, Illinois

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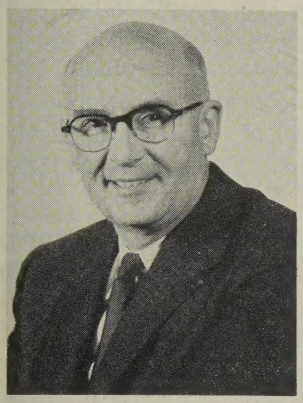
PRESIDENT'S MESSAGE

Professional Engineer's Insignia

Many engineers are reticent about displaying professional identification insignia. NSPE lapel buttons, rings, de-cals for windows, NSPE, ISPE and technical society membership are more often than not conspicuous by their absence on the person and in the office of a profesional engineer. (See Footnote at right.)



President Johnson

Why do we not exhibit such discreet indicators of our faith and pride in our profession and its societies? Why should we not go a bit further and display framed prints of the *Engineers' Creed* and *Canons of Ethics for Engineers** on our office walls? Are such exhibits to be frowned upon as evidence of undue pride, egotism, smugness or self-confidence? Or might we subconsciously feel that we may not measure up to the responsibility and engineering standards they imply?

Perish the thought, but could we be just a bit doubtful that engineering is a profession among professions—one in which we proudly proclaim membership.

Those members of our Professional Engineering Societies who do display certificates and wear NSPE badges invariably appreciate a comment from a visitor or a new acquaintance indicating his interest and perhaps his own professional engineering affiliation. When mutual membership in NSPE is thus recognized by new acquaintances the bond of comradeship that almost instantly develops in many cases is indeed gratifying and more noticeable than ordinary fraternal organization relationships. This is as it should be for NSPE or ISPE membership connotes similar educational and professional interests plus common membership in a friendly, helpful society.

May we suggest, if you do not own any of the professional emblems mentioned, that you order at least one of them now. Widespread use of NSPE buttons, display of membership certificates and other insignia will promote both professional unity and public recognition of our engineering profession.

ROYCE E. JOHNSON, *President.*

SUMMER ISSUE

Following the format established in June, 1946, this and the succeeding three issues of the Illinois Engineer appear as "self-covered" issues.

More Annual Committee Reports, as space will allow, are reproduced in this issue. Also, because of space limitations, Vox Secretarii has been omitted this month.

Your attention is particularly called to the article entitled "Manpower for Atomic Power." Mr. Richard W. Dodge, Editor of Westinghouse Engineer, *has generously allowed the* Illinois Engineer *to use his good story as is. Secretary Spicer "discovered" the story.*

P. E. ROBERTS, Editor.

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* Canons of Ethics and the Engineers' Creed (8½ x 11 size) may be had from the Executive Secretary's office. NSPE certificates, badges and other insignia are sold directly from NSPE, 2029 K Street, N. W., Washington 6, D. C.

DU KANE LADIES' AUXILIARY

The Dukane Ladies' Auxiliary Unit No. 6 was chartered in Aurora on May 18. The Charter was presented by President Royce Johnson to Auxiliary President Mrs. Richard Thornton. Other Illinois Society officers attending were Vice-President Andy Neureuther, Secretary-Treasurer A. Douglas Spicer and Executive Secretary P. E. Roberts, each of whom were called on for a few remarks.

The ladies accepted the Charter and each of those present signed it. Since there were several conflicting meetings, it was decided to hold the Charter open in order that other ladies in the DuKane Chapter area will have an opportunity to become Charter members of Ladies' Auxiliary Unit No. 6.

George Booth, Jr. presented a travel film in full color which was furnished by Standard of Indiana.

In every way the meeting was a success and the ladies of the Aurora-Elgin area will enjoy their new organization.

The officers of the new Auxiliary are Mrs. Richard Thornton, President; Mrs. George Booth, Vice President; and Mrs. John J. Fast, Secretary-Treasurer.

SUBSCRIPTION RATES

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Items of Personal Interest

William S. Gray, Joliet, member of the Board of Direction, was elected Will County School Trustee in April.

Rob Roy gave an impromptu recital on the bagpipe in his home early in May. Rob must have very understanding neighbors.

Another signal honor has come to Past President George Ekblaw. For his activities in Boy Scout work he has been presented the Silver Beaver Award. Congratulations to Dr. Ekblaw.

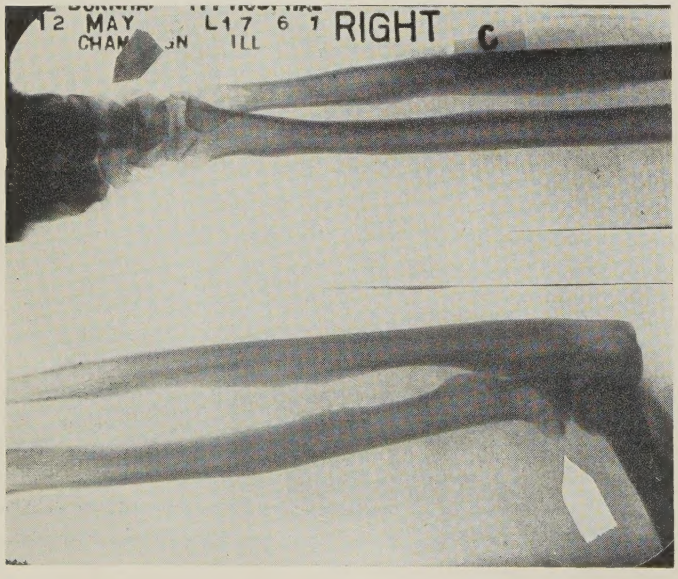
Ben F. Muirhead, member of the Board of Direction from Champaign County, will receive his Master's degree at the June commencement exercises of the University of Illinois.

Central Illinois Chapter has come up with an idea to stimulate interest in Mathematics courses, which has produced real results. The Chapter sponsored a contest among the three high schools and Milliken University and awarded a $25.00 savings bond and a $10.00 cash second prize at a meeting of the Chapter on May 24. Fifty members and thirty-seven guests were present. President John Housiaux announced that the awards had stimulated interest in mathematics courses to the extent that enrollment had increased as much as 70 per cent in some cases. The Central Illinois Chapter is to be congratulated on its innovation. The idea certainly should be tried in other Chapters.

INSIDE ROBERTS

Inside Europe, Inside Africa and inside many other places have been written. This is the inside story to stop all succeeding inside stories and it is titled *Inside Roberts.*

On May 12 your Executive Secretary had a ten-foot ladder collapse under him, resulting in a broken radius and a broken carpal. For those who need visible proof, a print of the X-ray accompanies.



M. L. ENGER, OBITUARY

Professor Melvin L. Enger, Escondido, California, died suddenly on May 13 in the Sharp Hospital at San Diego. Professor Enger had lived in Escondido since his retirement on September 1, 1949 as Dean of the University of Illinois College of Engineering. Professor Enger was a member of the faculty of the University of Illinois for forty-two years. He earned a Bachelor of Science Degree in Civil Engineering in 1906 and a Master's Degree from the University of Illinois in 1916. After graduation, he worked for a year in the Bridge and Building Department of the Milwaukee Railroad. In 1907 he became a member of the faculty at the University of Illinois, and in 1926 became head of the Theoretical and Applied Mechanics Department. From 1934 to 1949 he was Dean of the College of Engineering.

He was born on May 5, 1881 in Decorah, Iowa, married in 1908, and leaves a son, Captain Enger, and a daughter, Mrs. Henry of Omaha, Nebraska.

He became a member of the Illinois Society of Professional Engineers in 1908, a member of NSPE in 1947, and was elected an Honorary Member of ISPE in 1948. He was Vice-President of the Illinois Society in 1928 and President in 1929. He chairmanned and served on many Society committees. His other society affiliations included a directorship in the American Society of Civil Engineers, American Water Works Association, American Society for Engineering Education, Sigma Xi, Tau Beta Pi, Triangle, Chi Epsilon, Phi Kappa Phi and Sigma Tau. He was also a member of the Champaign-Urbana Kiwanis Club and wrote numerous technical papers.

REGISTRATION TOTALS

71st Annual Meeting

The total registration of the 71st Annual Meeting at the Moraine Hotel was 321, of which 204 were men and 117 women. Seventy-two of those who registered did not show Chapter affiliation, therefore, there will be fewer shown from some Chapters than actually attended.

The table for Chapters is as follows:

Ambraw	2	Lake County	46
Capital	13	Madison County	5
Central Illinois	12	Peoriarea	8
Champaign County	17	Rockford	13
Chicago	33	Rock River	6
DuKane	11	St. Clair	14
Egyptian	2	West Central	5
Illinois Valley	2	National Society	2
Joliet	8	Exhibitors & Guests	52
		Total	249

From the 1955 Illinois Society Annual Reports

REPORT OF THE SECRETARY-TREASURER FOR 1955

By A. D. Spicer

AS SECRETARY: The Secretary took the minutes of all four Board Meetings and also three Executive Committee meetings during the year. As Secretary, he also kept track of the actual physical work of the Executive Secretary's Office, acting as adviser and counsellor. The Executive Secretary's Office is running smoothly under the present arrangement and the work is being carried on quickly and efficiently.

AS TREASURER: The financial structure of the Illinois Society is on a firm foundation. The net worth of the Society rose from $5,759.23 to $6,181.98. The operating income was $422.75 in excess of expenses.

During 1955, A. T. & T. issued the right to buy one $100.00 debenture with the option to purchase one share of stock in trade for one debenture plus $48.00. The Finance Committee voted to accept the offer; therefore, the Society now owns eleven shares of A. T. & T. stock which has a market price of approximately $184.00 per share (March 1). Also on the investment list are $1,500 in Government Bonds. The income from the A. T. & T. stock is $9.00 per share or $99.00 per year and the income from the Government Bonds is $37.50 per year.

Again this year the idle funds are invested in short-term government obligations which are drawing an average of 2 per cent interest. These short-term obligations mature in June, September and December as the funds are needed.

The present sound financial condition of the Society is due to the work and cooperation of everyone connected with the management of the Society. It is recommended that the present policies be continued and that within reasonable limits, the acquisition of securities be continued as the opportunity presents itself, in order to build a cushion against the time when the Society must draw on its reserve funds to keep operating.

REPORT OF THE ILLINOIS DIRECTORS

To the National Society of Professional Engineers, March, 1956

"PROGRESS AND CONSOLIDATION" are the key words for the National Society of Professional Engineers during this last year.

Since the last annual meeting of I.S.P.E. at Rockford, Illinois, the national Directors attended three meetings of N.S.P.E. In June, 1955, the Annual Meeting was held in Philadelphia, Pa; the October, 1955 Meeting of the Board of Directors in Memphis, Tennessee; and the February, 1956 Meeting was held in Washington, D. C.

One of the most significant accomplishments of N. S.-P. E. was the *opening of the headquarters* during the February Meeting. The building is a functionally pleasing structure, containing 17,400 square ft. Of the gross, approximately 11,000 square ft. are available for office space, the remainder being utilized for mechanical equipment, corridors, rest rooms, etc.

The Headquarters' Staff will occupy the basement and first two floors consisting of approximately 6,400 net square ft. The third and fourth floors consisting of approximately 4,600 net square ft. will be leased. The revenue to be realized from this leasing arrangement will provide N.S.P.E. with $16,000.00 per year. The following organizations have executed leases with N. S.-P. E. for occupancy of the building:

The Institute of Traffic Engineers
Hauserman Company
Producers Council

All the members of N. S. P. E. should be especially proud of the fact that 100% of funds necessary for erection of the headquarters building was furnished by members or chapters.

Over $400,000.00 has been provided and all who participated showed a unity of purpose and a confidence in the future of N.S.P.E. I was proud to have participated in the financing arrangements and to be present at the ceremonies which opened the new building. Representatives of many allied groups took part.

During 1955, our *membership increased 6.7%* and approximately 36,000 members at the end of the year.

A great sign of progress and consolidation was evident in Washington, D. C. at the February meeting when both the *Iowa and Mississippi Societies petitioned N.-S.P.E.* for membership. The petitions were accepted and these Societies add over 1,200 members to N.S.P.E. This action brings the total of State Societies in N.S.P.E. to 40 plus a chapter in Puerto Rico.

The Iowa Society in voting for affiliation showed registered votes of 400 to 31.

Much work was done by members of I.S.P.E. to bring this neighbor state society which is 67 years old to join N. S. P. E.

Again, we must point to *Engineers Week* as a project of N. S. P. E. that has had great success and is of great value to Engineers throughout the country in raising their social status. The tremendous increase in public relations is having a great impact on industry and government. More and more the engineer is being recognized as a true professional, through our public relations programs.

Prior to Engineers Week, there were:

1. 1,200 Kits distributed.
2. Over three times the number of TV slides requested in 1956 than in 1955.
3. 6,000 large posters distributed in 1956 (only 1,500 in 1955).

Mr. Allison C. Neff has guided the Society activities as President this last year. He is a serious and devoted workman for N. S. P. E., doing much to consolidate all segments of the Engineering profesion. Next year, R. J. Rhinehart will be President of N. S. P. E. "Bob" is Vice President of the Arkansas Power & Light Company.

As I have mentioned many times in my reporting, the amount of *Committee work* that is done between Directors' meetings is an indication that engineers all over the country are carrying forward the activities of the society. The following comments indicate some of the more important actions of the various committees that have been approved by the Board of Directors during the past year. In addition to the specific things that seem worthy of comment, I would urge that all members of the society take another look at the report of the Board of Directors' meetings which appears in the *American Engineer*. The issue of July, 1955 carries a complete report of the actions taken at the Philadelphia meeting. In the November issue of 1955, the actions of the Board of Direction at the October meeing in Memphis, Tennessee are recorded, and the report of the February, 1956 meeting will, undoubtedly, be recorded in the March issue of the *American Engineer*.

The *Inter-Professional Relations Committee* reported in February that the four standard forms of agreement between Architect and Engineer and between Engineer and Architect, which were approved by the N. S. P. E. Board of Directors last October, has since been approved by the Board of Directors of the American Institute of Architects.

After review by legal counsel, these documents are to be printed by the facilities of A.I.A. with proper recognition to N. S. P. E. and available to N. S. P. E. members at cost. This method was agreed upon for reasons of economy and uniformity in the documents.

The *Engineering-Practices Committee* made many recommendations at the Memphis Board Meeting, and the Society approved the establishment of functional groups within the framework of N. S. P. E. at State and National levels as need for such groups becomes evident.

President Neff directed the Engineering-Practices Committee to handle consulting engineering functional group matters pending formal formation of functional groups. At the February meeting in Washington, the Committee presented an interim report recommending modification of the constitution and by-laws to permit the formation of such groups.

This work is being carried out at the present time, and the Constitution and By-laws Committee is studying the matter with the intention of presenting it to the annual meeting in June.

A Committee appointed by N. S. P. E. to work with the Engineering Council for Professional Development has been meeting throughout the year, and at the February Meeting in Washington, presented a resolution authorizing N.S.P.E. to present a proposal to E.C.P.D. requesting affiliation with that organization. The resolution was passed.

This action is another indication of the attempt of N. S. P. E. to obtain unity through action.

At present, there are eight members of E.C.P.D. and four members have indicated that they would approve the application of N.S.P.E. to join with them, and it is felt rather strongly that at least two more will approve the application which would indicate acceptance, and N.S.P.E. then would become a member of the Engineering Council for Professional Development.

The National Affairs Committee has been doing a great amount of work during the year in compiling the professional policies of the National Society of Professional Engineers. This compilation of policies is being distributed to the State Officers and is available, if requested, from the National Headquarters.

The Education Committee reported that Ohio and Idaho have been forming High School organizations called the "Future Engineers of America." Ohio has 27 chapters in the state, and it was suggested that such organizations could be formed in all the States. The aim of the organization would be to promote information and interest in the Engineering profesion among high school students.

Members of N.S.P.E. from Illinois have been very active in the program of the National Society during the past year. Virgil Gunlock has been Vice President for the Central Area. George DeMent has served as Chairman of the Engineers-in-Government Sub-Committee of the Employment-Practices Committee; and Linas Brown has served the past year as Chairman of the Engineers in Employ of Private Practitioners Subcommittee of the Employment-Practices Committee.

I should like to emphasize again the caliber of men who are consenting to speak to the Society at their meetings and who are willing to write articles for the *American Engineer*. At the February Meeting, we had the Honorable Harold E. Stassen, Special Assistant to President Eisenhower, as the guest speaker at our banquet.

In the *American Engineer* during the last year, articles have been written by such men as Henry G. Ritter III, President of the National Association of Manufacturers; by James P. Mitchell, Secretary of Labor; and by a great many other men who do not have the National reputation but are highly respected in their own fields.

In conclusion, may I suggest that we all go forward in unity to a "Brighter Future for Engineers" through the activities of N. S. P. E.

G. DeMent

A superintendent friend of ours says he overheard the sales girl at the drug store advising a good looking blonde on a particular perfume, "Don't use this if you're bluffing!"

Manpower for Atomic Power

The accelerating growth of the atomic-power field is almost daily increasing the demand for nuclear engineers. Huge newspaper and magazine advertisements and intensive recruitment campaigns bear witness to the urgency of the requirement for technical manpower in this new field. Perhaps some debatable questions are: Just what is "nuclear engineering"? Are the skills and background needed in this new field vastly different than those needed in more established fields? Just how is technical manpower used in the atomic-energy field? How sizable are the needs? . . .

One obvious fact is that it is too early in the game to tell what the exact needs will be a decade or more hence. However, the experience in this field so far does tend to clarify present requirements. The dollar cost of research and development, for example, while it does not give a direct answer, does provide a rough idea of where the most knotty technical problems have been encountered. An informal survey of the experience of several atomic-power development laboratories shows that research and development costs for the past few years break down this way: The largest amount of money went into metallurgy and metallurgical engineering—some 37 percent. The next largest portion went to mechanical engineering, about 28 percent. Roughly 11 percent went into experimental and theoretical physics, and the same percentage into electrical and electronic engineering. A total of about 7 percent has gone into chemistry and chemical engineering, and about 6 percent into operational engineering and testing.

This distribution of funds does not necessarily identify the kinds of technical personnel involved. A better gauge for this is the approximate distribution of bachelor's degrees among scientists and engineers working in atomic power at Westinghouse. When an informal survey was made some months ago, mechanical engineers constituted some 25 percent, electrical about 22 percent. About 15 percent were physicists. Almost as many, 14 percent, held degrees in chemistry and chemical engineering, with metallurgy degrees comprising 10 percent, mathematicians 4 percent, and the rest miscellaneous. These figures do not necesarily represent the most desirable distribution, but rather actual conditions. A higher percentage of some specialties would be desirable, if such people were available. Of this group physicists account for nearly half of the doctor's degrees; and only about 10 percent of the total number of scientists and engineers have earned doctor's degrees.

This tabulation is one means of helping to size up the nuclear engineer; another is to ask the man himself. Does he feel that his principal activities are in one of the established scientific and engineering fields, or does he consider himself a part of a new category, i.e., a nuclear engineer? An informal survey at Westinghouse revealed the somewhat surprising fact that only two or three men considered themselves primarily nuclear engineers. The rest designated one of the established fields as the best "label" for their activities. Some 36 percent specified mechanical engineering; 12 percent chemistry and chemical engineering; 10 percent metallurgy; 7 percent mathematics; and the rest other technical specialties.

Clearly, then, although nuclear power is a new concept and a new field of development, most of the effort is in established technical fields. Importantly, however, within those fields there is often a sharp departure from the usual and conventional. A metallurgist for example, is faced with the brand new problem of radiation as it affects materials. Similarly an electrical engineer encounters the problem of controlling a power source unlike any other in his experience. The net result is that although he may be well trained in metallurgy or electrical engineering, an engineer needs further training in the specifics of nuclear power before he truly becomes a "nuclear engineer." This fact, plus the urgency with which trained people are needed, has resulted in intensive training programs by government and industrial organizations to produce the people necessary for the various programs in progress. Westinghouse, for example, administers a program for all new engineers and scientists; in addition, special provisions are made to enable technical people to pursue advanced study at colleges and universities.

In terms of one specific project to develop, design, and build a reactor that is novel and must be completed within a tight schedule, one estimate places the requirements for engineers and scientists like this: materials group, 70; reactor design, 30; physics, 30; power-plant group, 70, for a total of 200. This, of course is a rough estimate, and many factors could influence the figures. Significantly, these figures are only for the organization that has overall responsibility and that performs the systems work, nuclear work, and other technical work that cannot be subcontracted. It ignores the hundreds of engineers involved in supplier organizations.

Aligned against these needs are other estimates that, to date, some 500 engineers and scientists have received formal training in the atomic-energy field, and something over 4000 brought in through the process of retraining on the job. The requirements obviously far outnumber the availability. The atomic-power industry could—today—use at least three to four times as many engineers and scientists as are actually engaged in this work.

The shortage of technical manpower is, of course, not unique to the atomic-power field. Nor can the blame be laid at any one doorstep. Nevertheless, it is a further page to the long list of reasons why our engineering and scientific shortage must be filled. The fact that the prime obstacle to the advancement of atomic power is the shortage of trained people should certainly serve as convincing evidence that we cannot let the shortage continue. We cannot afford anything less than an all-out effort to correct the causes—RWD

CONTRACTORS' DIRECTORY

PROFESSOR HUNTINGTON RETIRES

Over three hundred friends and associates of Professor Whitney C. Huntington sat down to dinner in the Union Ballroom on May 10. The number of people and the distances from which they traveled was as impressive as any word which was spoken from the speakers' table.

The occasion? These people assembled to show Professor Huntington and his wife that he not only did his work well, but that he had made as many friends south of Green Street as he had north.

Left to right—Dean Henning Larsen, Provost, University of Illinois; Mrs. W. C. Huntington; Dean William L. Everitt; W. C. Huntington, and President David D. Henry, University of Illinois, at the Huntington testimonial dinner, May 10, 1956.

Professor Jamison Vawter was Toastmaster. Brief speeches were made by President Henry; Provost Larsen; Dean of the College of Engineering William L. Everitt; head of Mechanical Engineering, Norman A. Parker; Professor Huntington's successor, Nathan M. Newmark; Professor Ralph B. Peck and Professor T. C. Shedd.

Professor Shedd presented Professor Huntington with a "traveling clock." He remarked that that was the standard gift to C. E. professors. When the gift was unveiled, it was discovered that it was a 17-inch portable GE TV set.

About Professor Huntington, he came to the University of Illinois as head of the Civil Engineering Department in 1926 and joined the Illinois Society the same year. In 1937 he became Chairman of the Building Program Committee, which post he held with distinction until 1955 when Professor Parker became Chairman. Professor Huntington is the author of a standard book on building construction and at the present time he is finishing a new edition of this book. He has been an especially good friend of the Society. As a matter of fact, he has done the Old English lettering on all the certificates presented to honorary members, Illinois Award and 50 year memberships.

Professor Huntington spends the summer in the Rocky Mountains near Denver; however, in the fall he will return to his Urbana home and will be busy as a consultant to the Building Program Committee, continuing his writing and keeping busy in numerous ways.

CHUCK WILLETT

Friends of C. K. "Chuck" Willett will be glad to know that Chuck is slowly recovering from the illness he has suffered since the middle of April. Chuck accepted assignment on the Legislative Committee, and Mrs. Willett writes that while he is still in the hospital, he is coming along slowly and it will be sometime before he returns to full duty.

The best wishes of the Society go with Chuck.

LOOKING AHEAD WITH ISPE

Presented at the Chicago Chapter, March 8, 1956

By R. E. Johnson

Philosophy of ISPE

Not having been steeped many years in the traditions of ISPE, my concept of the philosophy of a professional engineering society is undoubtedly naïve and, I am certain, subject to further development. Briefly it can be stated in two sentences.

1. A professional engineers' society serves its members most effectively by assisting and encouraging them to improve their own professional status.
2. Our Society, like a business organization, requires leadership and cooperation among its members.

1. A professional man's society serves best by assisting and encouraging its members to improve their own professional status. It is my conviction that such a society should not be a one-man organization, nor should it be run by a self-perpetuating hierarchy. Members should not expect the organization to be their bargaining agent or do more public relations work than the members do for themselves. As a group, Professional engineers by their works and accomplishments do more to create an enduring and high reputation than can public relations agents.

2. Regarding the comparison of our Society with a business organization, it is obvious that a manufacturing organization prospers as a result of cooperative action by all employees under the leadership of its officers. This includes the whole team which consists of laborers, semi-skilled and skilled workers, technicians, engineers, and other professional experts and management. The motivating force for industrial employees is a mixture in various proportions of desire for profit, earning a living, aiding their fellowmen, and the satisfaction of accomplishment. The motivations in our professional engineering society are similar but in much different relative magnitude. Similar also are the frustrations, impatience with slow progress and the occasionally pleasant feelings of accomplishment by various members of the team. There is one big difference, however. In a business organization there are executives, superintendents and foremen whose requests and orders demand compliance. In our Society the officers can accomplish nothing by themselves and are equipped with no positive means of motivating the members. The society has to rely on volunteer workers who, in some cases, appear to feel that the officers should be working for them. In other cases, individuals feel that, being partners, things should be run their way. Still others have no detectable feeling unless it be that the society is being poorly run.

I believe our fundamental objectives are the same, whether a member is from Waukegan, Springfield, Rockford, Decatur, or Chicago. However, one of our basic problems is that of recognizing what our objectives really are and agreeing upon our approach to their attainment.

Activities for ISPE

A number of suggestions for activities in keeping with this philosophy have developed. No doubt you can add to the list.

1. Promote membership growth in ISPE and NSPE. The largest, but not necessarily the most fertile field, from which to recruit new members is industry. The great majority of non-member professional engineers are industrially employed. Evidently we shall have to enrich this field by activities, objectives and results which will interest industrially employed professional engineers. Activities to interest EIT's and various functional groups of engineers appear to be essential for promoting membership growth.

2. Improve Chapter activities. For most members the Chapter is the only agency of our Society that might effectively reach them. Many, although by no means all, delinquent members get that way because Chapter meetings are of no interest to them. Our continual lack of attention to our EIT or Junior members could well be largely remedied at the Chapter level.

3. Review registration laws and other laws pertaining to engineers with the objective of amending existing laws, encouraging additional classifications of engineers to register, and of further safeguarding public welfare.

The definition of engineers eligible for registration might well be broadened. At present, engineers in the specialties of petroleum, electronic control, process control, and nuclear reactors are examples of engineers not mentioned in the law as being eligible for registration, although they are as professional as other branches of engineers.

Provisions for registration on the basis of eminence are also desirable. This would create in the minds of unregistered, mature, successful industrially-employed engineers a much more favorable reaction toward registration for themselves and their subordinates than many now have.

The committee on registration laws will have to start early and work with the Illinois Engineering Council to get the groundwork done in time for action in 1957. Assistance of members in every chapter will be necessary.

4. Alter our annual meeting program to provide more of interest and value to young engineers as well as to all other members. Currently the criteria of a successful annual meeting seem to be the number of men and wives attending, funds raised, and the cash surplus afterward. Professional development or service is scarcely given a thought.

5. Improve the performance of our committees. This gets us to the level where the members will be improving themselves and gaining helpful experience as they function. It will also be aiding the society membership in general. Present committee practice of concocting a re-

port based on no work in the first three quarters of the year and one or two days' work in the fourth quarter would not be tolerated in a successful business.

6. Develop means to directly aid professional improvement for engineers, such as
   a. Set up an advisory committee to confer with the Deans of engineering colleges on curriculum and policy. This committee could probably be more effective if, as is done in one neighboring state, its membership served anonymously and made no public reports. In the state referred to, monthly meetings are held with the Dean to discuss problems concerning engineers.
   b. Aid in the establishment of night classes in graduate engineering courses in cities where such classes are not now available. Many of the better engineering students now seek employment where they can get a master's degree while working. The absence of graduate study opportunity in Rockford, for example, seems to be the principal reason why we now seldom are able to employ an engineer from the top quarter of the class. If Illinois cities outside the Chicago area are to hold their relative industrial positions they should be able to recruit a proportionate number of young engineers with superior research and design ability.
   c. Aid in making cultural and self-improvement courses available to employed engineers.

7. Encourage participation in civic affairs. The Bar Association, among other things, at their 1955 convention in Rockford had a panel discussion on how lawyers could be more effective in public affairs. The engineers might well emulate certain activities of the Bar and Medical Association in respect to public relations.

Traffic control studies and operational research studies on city and institutional management should be fruitful civic fields for the application of the engineering method.

Conclusion

This appears to be a fairly comprehensive list of things ISPE ought to work on. More items could be added but I believe we will do well to emphasize each year not more than two or three activities. Basic work, however, should be under way on the other items.

Did you forget? Dues are due on January 1 each year. The price you pay for helping to support the Illinois Society and National Society is not large. However, your support is necessary. If you forgot to send in your check for 1956 dues, it will be of necessity that your name be removed from the Illinois Engineer mailing list. Please send your check to the Executive Secretary's office today.

To recapitulate, I believe the philosophy of our society may be summarized as follows:

1. It will serve its members best by assisting and encouraging them to improve their own professional status.
2. It is like a business organization in that it requires internal cooperation and teamwork among its members.

Society activities which need continued and even more attention than they have received are:

1. Membership promotion.
2. Improvement of Chapter activities.
3. Improvement of registration laws.
4. Program improvement for our annual meetings.
5. Better committee performance.
6. Professional improvement for engineers as individuals.
7. Encourage participation of engineers in civic affairs.

The big problem of getting energetic, capable committee members to carry on these activities remains to be solved. Your enthusiasm tonight leads me to believe we can find good committee workers right here.

THE PROFESSIONAL ENGINEER

I attended the 71st Annual Meeting of the Illinois Society of Professional Engineers, held at Highland Park, under a handicap. Three weeks prior, I had the misfortune to break my left leg, so I was wearing a cast that extended about six inches above the knee. Not being able to bend the knee placed quite a strain on the muscles of the thigh when sitting in a chair.

Several members showed that the engineer was kind and considerate of others by helping me in many ways.

At the noon recess of the first 72nd Board of Direction meeting, President Johnson suggested that they autograph my cast. This was something that you would hardly expect from mature men dealing with the serious problems of life. Why did they participate in this little bit of "horse-play"? The only answer that I could think of, was that even with the serious nature of his work, the engineer still retained his sense of humor and was still young at heart.

Possibly it is this youthful heart that gives the engineer that dynamic power to do things and get things done. It gives him that force of action that we sometimes call "drive." No matter what the challenge, the engineer will, in some way or other, come up with a solution to the problem.

This reminds me of a motto that the first District Engineer of the Division of Highways in District Number Three had posted beside the stenographer's desk. It read—"The Scientist said it couldn't be done, but along came the dam-fool Engineer and did it."

F. L. Dunavan, Illinois Valley Chapter

PROFESSIONAL DIRECTORY

If skill could be acquired by watching, dogs would become butchers. —*Turkish Digest.*

What this country needs is a ladies' shoe that's larger on the inside than on the outside.

Two engineers were duck hunting and though they had been shooting at ducks for hours, they hadn't bagged a single one.

"It's getting late," said one of them finally, "and we haven't hit one duck we've shot at all day!"

"Yeah," responded the other. "Let's miss two more and go home."

In the footprints on the sands of time some people leave only the marks of a heel.

COST OF LIVING INDEX

The cost of living correction factor to be applied to the I.S.P.E. Schedule of Minimum Fees and Salaries is based upon the Consumer Price Index of the 1947-49 average as determined by the Bureau of Labor Statistics. On the 1947-49 base the correction factor for April, 1956, is 114.9.

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For further information about these advertisements, apply to E.S.P.S. Chicago, using the key number indicated. Prepared ENGINEERS AVAILABLE advertisements limited to 40 words, with typed résumé attached may be submitted to E.S.P.S. Chicago by members of the Illinois Society of Professional Engineers at no charge.

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Mech. Eng. Executive. M.E. 38. 16 yrs. exp., 11 in managing des., dev., sales co-ordination and prod. of highly precision mech. products. Organizational and mgmt. ability. Presently empl.; seeking more opportunity and challenge. Will relocate. $9½-$10,000. 498 IE

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FOUNDER OF HEATH CANDY BAR DIES

Old-timers in the Society will remember that Mr. Lawrence S. Heath of Robinson, Illinois became a member of the Society in 1927 and was active until 1933.

He was a graduate of the University of Illinois and his application states that he had many years of experience in surveying and engineering work. Besides being an engineer, he was admitted to the Bar in Illinois in 1894, he taught mathematics in Carthage College and held a life state teachers certificate in Illinois. He was twice Mayor of Robinson and the first President of the Robinson Rotary Club.

He operated a dairy in Robinson and when he found it difficult to get rid of surplus dairy products, he began the manufacture of Heath Candy Bar, which became one of the best known nickel candy bars in the United States.

Mr. Heath died recently; however, his three sons carry on the business and one of them is a trustee of the University of Illinois.

I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves by way of amends to be a help and ornament thereunto.

Sir Francis Bacon

NEW HONOR FOR BABBITT

RIO DE JANIERO, May, 1956—Executive Secretary Emeritus Harold E. Babbitt and Professor Charles R. Cox, both from the University of Illinois, have been made honorary professors in the University of Minas Oerias in recognition of their service with a joint Brazilian-American public health agency.

This honor is particularly significant inasmuch as the Brazilians are very cautious about conferring honors of this kind. A very limited number, only seven or eight, have been so recognized during the past thirty years.

The Minas Oerias School of Engineering conferred the honors, which were presented by Director Mario Werneck de Alencar Lima at Belo Horizonte, capital of the State of Minas Oerias.

Professor Cox assisted the university in creating a graduate course of study for sanitary engineers, and he and Professor Babbitt have been alternating as guest lecturers in the course. Both are sanitary engineers. They are in Brazil with the International Cooperation Administration.

Professor Cox was national director of the American Water Works Association from 1941 to 1944. Professor Babbitt was a member of the Illinois faculty for 41 years and is now retired.

A girl may be fit as a fiddle but it takes a beau to make her play.

One of the 160 Uses of CONCRETE on Railroads

NO. 27 OF A SERIES

This 40- x 408-ft. concrete warehouse was built by the St. Louis Southwestern Ry. for handling merchandise for truck delivery in Dallas. Economy in construction was achieved through the "tilt-up" method. Wall panels were cast flat on the floor in simple edge forms and tilted up into final position.

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